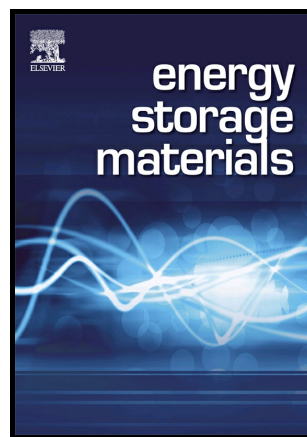


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**Enhancing thermoelectric performance of FeNbSb half-Heusler compound by Hf-Ti dual-doping**

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**Abstract**

FeNbSb half-Heusler compound has recently been identified as a promising high temperature thermoelectric material for power generation with figure of merit  $zT > 1$ . Single doping is a general and effective way to simultaneously adjust the electrical power factor and reduce the lattice thermal conductivity in this system. Here we report the enhanced thermoelectric performance of  $\text{FeNb}_{0.9-x}\text{Hf}_{0.1}\text{Ti}_x\text{Sb}$  ( $0 \leq x \leq 0.1$ ) by Hf-Ti dual-doping, which shows a maximum figure of merit  $zT$  of 1.32 at 1200K. Hf-Ti dual-doping significantly reduces lattice thermal conductivity. A reduction of 30%

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